

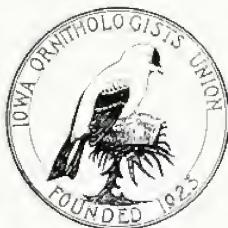
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SANDHILL CRANES

"We now see a score or a dozen of these great birds, where Coues or Baird saw thousands."

This painting is by Walter A. Weber, and is taken from "Fading Trails," a book prepared by the Department of the Interior and the National Park Service, and published by the Macmillan Company. Printed by permission of the National Park Service and the Macmillan Company.

MIGRATION OF THE SANDHILL CRANE IN NEBRASKA

By WILLIAM YOUNGWORTH

SIOUX CITY, IOWA

The passing of so many of our larger bird species into oblivion is being brought to the attention of some of us older bird students, when we compare some of our present bird records with earlier ones and then go back further and compare our present day records with those of Coues, McChesney and Judd, who did much work out in these prairie regions and reported bird life so abundant. We begin to wonder when we see some of these rarer species today, that perhaps it may be some of our last records. It is with this thought in mind that the writer recorded the small numbers of Sandhill Cranes he saw during the 1947 spring migration in Nebraska. It is quite apparent that we now see a score or a dozen of these great birds, where Coues or Baird saw thousands. The numbers of the Whooping Crane are so small that unless one were in some certain small spot, they would not be seen at all as they cross Nebraska during migration.

The first cranes came into flooded areas near Atlanta, Phelps county, on March 18, and the birds were counted as they came. The flocks were as follows: 45, 7, 8, 12, 7, 50, 8, 10, 7, 60. March 20, one flock of 12 birds was seen. On March 21 we counted in flocks of 30, 5, 85, 12, 9, 4, 40, 10, 63, 4, 4 and 17. March 23 was spent along the Platte River in Kearny and Adams Counties, and flocks of cranes with the following numbers of birds were counted: 7, 4, 10, 8, 4, 3, 13, 28, 24, 40, 16, 27, 20. On March 24, at Atlanta, flocks of 23 and 8 birds were seen. On March 25 we saw one flock of 4 cranes and on the 26th, one flock of 19 birds. The 27th was a good day again and we saw flocks of 19, 25, 17, 60, 30, 12 and 4 birds. The incoming flight from the south was now nearly over, and on March 28 we saw two flocks of 16 and 18 birds; on the 29th one flock of 44 birds; on the 31st flocks of 8, 9 and 14 birds; and on April 1, our last incoming record of one flock of 12 cranes. From what the writer was able to determine, there are at least two routes, which the cranes follow as they come up from the south—one in the vicinity of Hastings and the other about 60 miles west near Atlanta. There are probably scatterings of cranes coming into the Platte river at other points, but I think at the present time the two above routes are the main lines of flight.

The totals of all flocks seen are not large, being slightly over 1,000 birds. With Nebraska farmed along the Platte River as it is, it is a wonder that these large birds have persisted as long as they have. On one occasion I saw a group of foreigners armed with 22-caliber rifles firing into a large flock of Blue and Snow Geese resting on a bar in the Platte River. It might just as well have been a flock of cranes, and no doubt some are shot that way every year. There are probably some duplications in flock counts, as it would be impossible to have a perfect count where birds or animals are concerned. Observations indicate that the Sandhill Cranes spend about a month along the Platte River and tend to move up stream before taking off for the north. It appeared to the writer that the big concentration took place west of Elm Creek, Buffalo County, for it was here on April 20 that we saw a large loose flock of from 500 to 1000 cranes milling around much in the manner of geese as they get ready to take off for a long flight. This flight of the cranes must take them well through North Dakota and up into Canada, as there seem to be no recent reports of cranes anywhere through the intervening country.

THE GOOSE FLIGHT OF WESTERN IOWA*

By JACK W. AND MARY R. MUSGROVE

DES MOINES, IOWA

(With a drawing by Maynard F. Reece)

Of the many wildlife spectacles to be found the world over, it is doubtful whether any surpasses in magnitude and sheer wild beauty the spring flight of Blue and Snow Geese in western Iowa, along the broad alluvial flood plain of the Missouri River. This area, scenic and historic in itself, is bordered by rugged loess bluffs, where centuries ago wind deposited layer upon layer of fine earth. Into this compact soil, water has cut almost vertically, leaving sheer walls which at a distance appear to be miniature mountains, clothed in coarse blue stem, studded with drought-resisting yucca, and still showing the deeply worn trails left by the American bison. Between these bluffs flows the sprawling muddy Missouri with its shifting sand bars and rank growths of willow slaps.

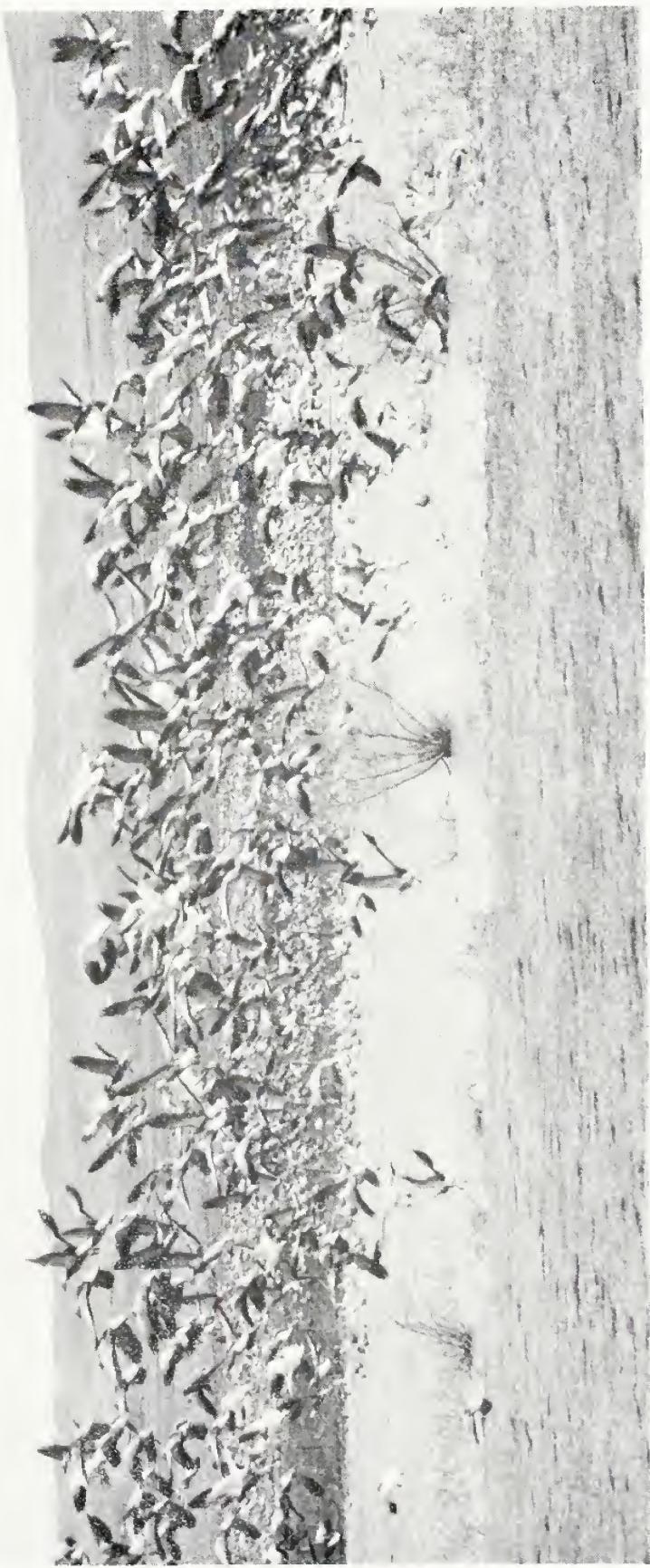
In all probability this area has been the migration route of Blue and Snow Geese for centuries, but until recent years it has remained almost unnoticed, and the lives of these birds have been clothed in mystery. This migration was unmentioned by early naturalists—Audubon, Lewis, and others—who came to this area and probably missed one of the most magnificent spectacles ever to greet the eyes of man.

During the last few years the long pilgrimages of these birds have been unraveled, and their flights charted from the wintering grounds on the gulf coasts of Louisiana and Texas to the breeding grounds on the arctic tundra of Baffin Island, where winter winds and grinding ice greet them on their arrival in mid-June. Their nesting grounds are inaccessible places seldom visited, nor would they be as spectacular as the sight to be seen on the western border of Iowa during the spring migration.

Early in March, often while ice remains on the ponds and streams, with snow drifts partly covering the hills and filling the ditches, come the first arrivals of Blues and Snows. So anxious are they to move northward that the first flocks follow on the heels of retreating winter, often to be forced back temporarily by severe weather. Advancing, they are joined in a few days by countless thousands which gather in huge flocks or concentrations, covering the fields or marshes where they have chosen to stop.

To visit the birds in this area is to see a sight never to be forgotten. It is within the reach of thousands of people; is accessible by means of hard-surfaced roads, yet only during the last few years have people awakened to the possibility of the enjoyment and recreation to be had within a few days' drive of their homes. Formerly only those living in the locality, and passengers on trains crossing the Missouri bottoms, were aware of the magnificent flight. Naturalists from many parts of the country now visit this flight annually, and late years have seen more and more motorists stopping along the roadsides to view the thousands of Blue and Snow Geese resting, feeding, or in flight in this scenic area. It is something to look forward to. Anyone who has ever witnessed this sight will find himself drawn back year after year by the magnetic, irresistible call of the "waveys." The raw March winds sweep cold and wet across river flats and marshes, the wet gumbo clings in great balls to the observer's feet, yet it is possible to shut out both cold and damp by dressing warmly, and, armed with binoculars, telescope, or cameras, one is prepared to watch the huge concentrations of geese which arrive every year between the 10th and 25th of March.

* Reprinted from "WATERFOWL IN IOWA", pp. 93-102, by permission of the Iowa State Conservation Commission. Copyright 1947 by Iowa State Conservation Commission.



GEESE IN FLIGHT IN WESTERN IOWA—A TYPICAL SCENE
(Des Moines "Register and Tribune" photograph)

Within a short driving distance of several large towns are vantage points from which the flocks may be viewed. One can observe them congregated in tightly packed groups, watch them as they take off to feed in the morning, and hear the clamor of their voices as they swirl and mill in the air, going to some nearby cornfield to feed on waste grain. Their feeding activities can be seen readily, as they swarm over the ground, literally piling over each other, working through the fields, and cleaning up what remains of last year's crop. Temporarily satisfied, small groups return in a short time to the concentration, to be replaced by others, shuttling back and forth between the resting and feeding grounds. Long lines and waving formations arise from the fields, small groups and individuals, many with balls of black gumbo and weeds still clinging to their feet.

High in the sky overhead, at times barely distinguishable, will be seen traveling flocks, irregular V-formations, large V's breaking into smaller ones, all overlapping and stretching for miles. Some of these flights continue northward; others pass the concentration, then as if by some pre-arranged signal, break formation, swing and sideslip or tumble like falling leaves, losing altitude rapidly, and alight with the resting flock. As these new arrivals drop from the sky they extend their necks, throw back their wings and dangle their coral-pink legs, light gracefully, take but two or three steps to break the momentum, and find room to settle in a flock that appeared so densely packed there was room for no more. As their numbers increase, the spongy ice of the lake sinks beneath the combined weight of many thousands of birds.

Here one may watch these birds resting and preening and see the beautiful rust stains on their heads, the crinkled satin of their necks, and their countless plumage variations. Among the Blues are young birds of last season's hatch, with dark heads only lightly flecked with white; others with more mature plumage, showing considerable white on their heads; and the veterans of many migrations with the white of their necks running down to the shoulders. There are those which show the plumage characteristics of both Blues and Snows, blotched and piebald in appearance, in all likelihood hybrids between the two. Nor is variation in plumage limited to the Blues, for the Snow Geese exhibit a variety of water stains, younger birds still show grayish plumage on their necks and bodies, and rarely a bird is snow white except for its jet-tipped wings. Close observation will reveal that the Blues outnumber the Snow Geese about 20 to 1.

Among the flocks in the air will be small groups or lines of White-fronted Geese with their speckled bellies, and occasional V's of the largest of American geese, the Canada. In spite of their similar size, the White-fronts are easily distinguished from the Blues and Snows by their laughing calls, their slender build, narrow wings, and stiff-necked manner of flying. Often they break their formation over the concentrations of Blue and Snow Geese, side-slipping, twisting, darting, and gaining momentum at low altitudes over the mass of geese, but seldom alighting with them, choosing instead a resting spot at one side of the concentration. With their sedate flight, glistening black necks, and broad wings, the Canadas resemble gigantic bombers among their smaller cousins. Occasionally one is privileged to see the rare Hutchins's, bantam of the goose family, short and chunky in appearance but miniature Canadas in behavior. Through the flocks of geese dart small bunches of ducks, dwarfs in comparison, with rapid wing beats and interrupted flight—Pintails in their courtship flights, several long-necked, graceful males performing aerial acrobatics for the benefit of a single female; Green-winged Teal with their high-



FORNEY LAKE

pitched, shrill quacking and darting flight; Baldpates with their shrill whistles, swinging low over the marshes and fields; Mallards, already paired; Redheads with their soft, mewing calls; American Mergansers with bright crimson legs, contrasting black and creamy-white plumage and stiff manner of flight.

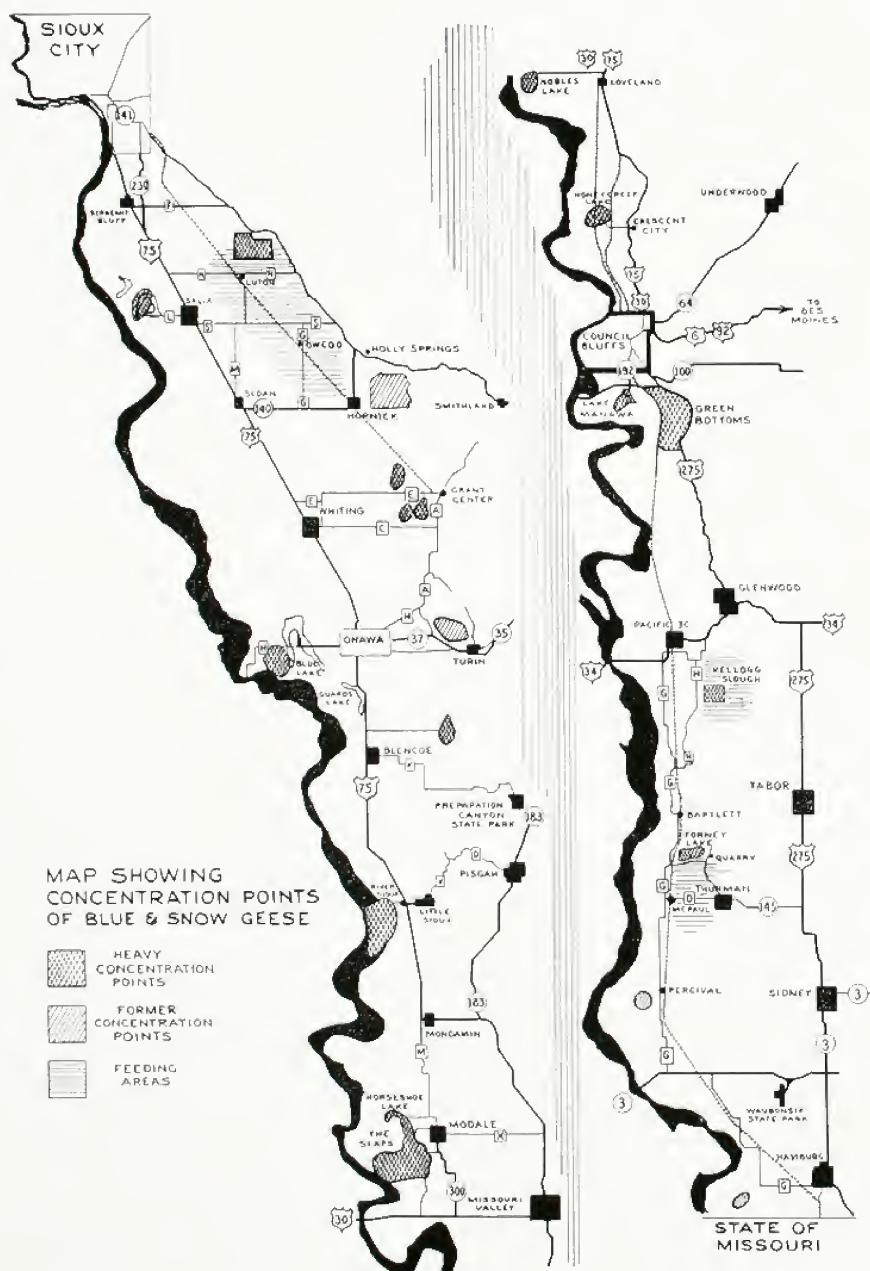
Not long do the flocks stay at rest. The approach of an airplane or of someone trying to get nearer for a picture frightens them and they take to the air in a dense swarming mass which resembles a plague of locusts, with a deafening roar of wings and clamoring voices. Silhouetted against the sky, they present one of the most striking sights imaginable. The sparkle of Snow Geese against the blue sky lends enchantment, and it is difficult to believe that there could have been so many birds on the lake. They soon will return to rest, but each milling activity attracts new flocks; small groups may take off for more northern destinations and hardly be missed.

During the afternoon the feeding performance will take place again, but the best part of the show is yet to come. As the sun drops below the horizon and the sky is painted with every shade of crimson, orange, and lavender, the birds return to their resting grounds, and silhouetted against the flaming sky comes the evening flight of the "waveys." Long lines, broken V's and small flocks—like strings of beads in the sky—come lazily in. Even after darkness has settled the birds still come, more and more until one may think there is no end.

Returning home hours later with the clamor of their voices still ringing in one's ears, one realizes that no other sight compares with this. Days spent in the duck-blind were enjoyable ones, but looking back over years of hunting, fishing, and other types of recreation, the time spent among these geese, with only camera or binoculars for armament, has been the most memorable. There is no closed season on observation or photography; no bag limits are imposed, nor is any license necessary. Nothing could be more of a challenge to the photographer, be he amateur or professional. All are on an equal basis, and although a few years ago these roadways were littered with cartridge boxes, now one finds only empty film containers, mute witnesses to the fact that someone has enjoyed the geese to the fullest by recording memories which will abide with him for years to come.

The flight during the spring of 1947 developed into one of the largest concentrations ever seen in this area. Bad weather prevented the birds from moving north, and they congregated on the Forney Lake area of Fremont County until by rough estimate, the birds in this concentration numbered at least a half million. Single photographs of a very small portion of this flock may show 10,000 or more geese. The scene attracted cameramen, outdoor writers, naturalists, scientists, and people from all walks of life. Many commented on the number of birds and the beauty of the sight, and one old sportsman now in his 86th year remarked, "It's funny that it took me 80 years to realize a person can enjoy birds in other ways than looking down the barrel of a shotgun."

The migration through Iowa is usually leisurely, with the timing depending, of course, upon weather conditions. The flight usually last three to four weeks, the first birds coming during the early part of March and the large concentrations generally occurring about the 15th. Areas where the birds are feeding will be inhabited by these large flocks for several days, after which the bulk of them will move northward to the next spot at which they congregate. The first arrivals usually land on the bottom lands west of Hamburg, Iowa, moving shortly to an area near Percival or to Forney



Lake. In a few days they appear at Kellogg's Slough, an area south of Glenwood, going on to Green and Manawa bottoms south of Council Bluffs, with some continuing to Honey Creek Lake and Noble's Lake. There will be small concentrations near Modale in an area known as the Slaps and others near River Sioux on the Missouri River itself. This area, while not too popular with the geese, is a paradise for other types of waterfowl. The next large concentrations will be near the Onawa-Turin area or around Grant Center. The last great concentration in Iowa will be in the Hornick-Luton area south of Sioux City. Many of these areas will hold large concentrations every year but changing conditions may alter resting and feeding grounds. As a general rule, however, small groups and scattered flocks containing from 500 to 10,000 geese are to be found throughout the entire area.

The birds leave the Missouri River near Sioux City, most of them following the Big Sioux River into Minnesota and South Dakota, from there to the marshes near Winnipeg, Manitoba, on to James Bay, and into the Arctic to their nesting grounds. For years Blue Geese disappeared into the Arctic and their exact breeding grounds remained unknown. J. Dewey Soper, working under the Department of Interior, Ottawa, Canada, discovered the nesting grounds of these birds, June 26, 1929, on the great western tundra of Baffin Island, in a narrow strip of coastal plain along the eastern shore of Bowman Bay, Foxe Basin. In 1930 Dr. George M. Sutton discovered still other Blue Geese nesting on Southampton Island in Hudson Bay, several hundred miles west of those discovered by Soper; and Angus Gavin of the Hudson Bay Company in 1940 found two pairs of Blue Geese nesting on a tributary of the Perry River. The 3,000-mile flight from their wintering grounds in Louisiana to their breeding range requires about 11 weeks, the birds arriving at the nesting grounds in mid-June.

In the fall, Blue Geese leave their breeding grounds the first part of September, coming down the eastern coast of Hudson Bay and congregating on the extensive salt marshes of Hannah Bay at the extreme south end of James Bay. Early in October, the southbound flight moves rapidly toward its destination in Louisiana and does not cover the route taken by the spring migration. Although few Blue Geese are seen over the entire flyway in the fall, during the last few years increasing numbers have been stopping in this state, particularly around the middle of October, and at times they have been hunted with some success. Formerly the Blue Goose was very rare in the fall, almost all the birds passing over at high altitudes in a non-stop flight. This pattern of flight has allowed the species to maintain its numbers, with few being killed during the fall flights except those taken by the Indians at Hudson Bay and by hunters and trappers on the wintering grounds in Louisiana. Blue Geese have few natural enemies and if their winter range is well protected, should continue to delight the eye of the naturalists and sportsmen of this country.

It is hoped that more people will avail themselves of the opportunity to visit the flight of Blue and Snow Geese during the spring months. It is a sight to awe anyone who enjoys the out-of-doors. Information regarding the flights, the location of concentrations, and the best route to follow can always be obtained through the State Conservation Commission or from the local conservation officer in the area. The map accompanying this text shows areas on which large numbers usually congregate, and roads that will take one closest to these concentrations. In most places it is quite possible to observe the geese from the highway, although one may enjoy a better view by walking closer to the flocks, or by settling down to spend an entire day in an improvised blind. As the sticky black soil makes unsurfaced roads in this area almost impassable, it is advisable during wet seasons to follow only the surfaced roads shown on this map.

THE FIFTH ANNUAL IOWA SPRING BIRD CENSUS

Compiled by PEARLE C. WALKER

Our spring bird census of 1947 almost failed to see the light in print. The date for taking the census was not set when the March issue of "Iowa Bird Life" was published, hence our members didn't know when it was to be taken (the date was announced at the Cedar Falls convention). Mr. and Mrs. M. L. Jones, who had compiled the last three censuses, could not find time to do the work this year, as it came during the busiest season for a state park custodian and his wife. (The Editor of "Iowa Bird Life," fully realizing the magnitude and responsibility of the job, and not having time enough to work on it in summer, has never attempted it.) Mr. and Mrs. Jones sent the seven censuses on to President Ayres. The lists were at length put into tabulated form by Miss Pearle C. Walker in the Ayres law office. The representation is small this year, but since observers at seven stations took time to make the lists, it seems desirable to publish the results. The tabulation lacks the data on temperature, number of parties, observers, hours, mileage, etc., which have been included in other years—this also to be charged to lack of time. Some of the data are included in the descriptions under each station.

If this feature is to be continued, the ways and means should be carefully studied. It should be done by a staff of compilers, as it is too big a task to impose on the generosity of one or two persons. If the census grows each year, as seems likely, it may become too bulky to print—and we should not lose sight of the fact that the printer makes a considerable extra charge for setting up the tabulation in small type. Finally, we should have a "Board of Review" to pass on the validity of rare records, for errors will creep in and impair the scientific value of the compilation.—F.J.P.

1. ATLANTIC. Cass Co. Fields, woods, cemetery and lake north of city. (No date given, presumably May 17 or 18.) Mr. and Mrs. Frank Berry, Mr. and Mrs. Glen Jones, Mrs. Catharine Farquhar, Mrs. D. C. Bice, Alma Beckwith, Grace Barnard, Miriam Goddard, Marybel Brown, Gene Ruhr, Don Bice, Chas. Mallette, David Wayne Brown.

2. CEDAR FALLS. Black Hawk Co. Snag Creek, Union Bridge, Goose Lake, Golinvaux Slough, Cotton Lake, Casebeer Heights, Shirley Lake, and Hartman Reserve. May 17; 5 to 12 a.m., 1 to 7 p.m.; total 13 hours, 31 observer hours. Cloudy; light rain in a.m.; wind, 0 to 10 m.p.h.; temp. 50-56°; 60 miles by car, 18 on foot. Three persons together except for one two-hour period. Martin L. Grant, C. W. Robertson, Mrs. Russell Rugg.

3. CEDAR RAPIDS. Ellis Park, Robbins Lake, C Street woods, Amana, Swan and Cedar Lakes, Mound Farm woods, stone quarry and roadsides; upland and lowland woods, lakes, marshes and meadows. May 18; 5 to 14 hours in the field; total observer hours, 161. Fair; light wind; temp. 45° to 82°; 50 miles by car, 14 on foot. Fifteen observers in two parties (names not given). Cedar Rapids Bird Club.

4. DES MOINES. Polk Co. Brown's Woods, Charles Sing Denman Woods, Brenton's Slough, Lower Towner Lake, Crocker Woods ravine, Pine Hill Cemetery, Parker's Woods, Dove Woods, Fisher's Lake, Sanctuary, Greenwood Park, and roadsides. May 17; 6 a.m. to 6:15 p.m. Cloudy; light winds; temp. 52° at start, 61° at return; 66 miles by car, 11 on foot. Eight observers in four parties. Mrs. Toni Wendelburg, Irene Smith, John Mach, Albert Berko-witz, John Dill, Mrs. Jos. Chamberlain, Mrs. Lester Haskell, Mrs. H. R. Peasley.

(Continued on page 74)

	1. Atlantic	2. Cedar Falls	3. Cedar Rapids	4. Des Moines	5. Dubuque	6. Ottumwa	7. Tama
Pied-billed Grebe							1
Double-crested Cormorant							
Great Blue Heron	3	3	2				
Green Heron	2	1	3	4		3	
American Bittern			1	1			1
Least Bittern			4				
Common Mallard	1	3				6	
Gadwall	1						
Blue-winged Teal	4	7	2	12		4	
Wood Duck	2	2	2				
Lesser Scaup Duck		10	1	1			
Sharp-shinned Hawk		1					
Cooper's Hawk			3	1			
Red-tailed Hawk	5	2	1			3	1
Red-shouldered Hawk		2	5	2			
Broad-winged Hawk						1	
Amer. Rough-legged Hawk		1					
Marsh Hawk			2	1			
Osprey			1				
Sparrow Hawk	2	1	2	2		3	
Bob-white	2	2	16	7	5	3	
Ring-necked Pheasant	2	15	9			40	
King Rail			1		1		
Virginia Rail	3	2	10	9	5		
Sora			1				
Florida Gallinule			1				
American Coot	30	25	25	30		12	
Killdeer	20	8	6	7	4	10	7
Spotted Sandpiper	6	2	9	3		7	
Solitary Sandpiper			1	2		2	
Lesser Yellow-legs	5		2				
Pectoral Sandpiper		6					
Least Sandpiper			12				
Common Tern			1			6	
Caspian Tern	1	5	76	67		20	
Black Tern							
Mourning Dove	50	50	67	97	10	35	9
Yellow-billed Cuckoo					2		
Black-billed Cuckoo			1			2	
Great Horned Owl		1	1			1	
Barred Owl		1	1	4		1	1
Whip-poor-will			7			1	
Nighthawk	8	3	8	6	4	17	3
Chimney Swift		75	140	54	65	50	8
Ruby-thr. Hummingbird			7	1	1		1
Belted Kingfisher	3	6	4	5		2	
Flicker	10	12	10	20	6	15	6
Red-bellied Woodpecker	1	3	3	4		2	
Red headed Woodpecker	15	20	37	31	2	10	7
Hairy Woodpecker		3	2	5		2	
Downy Woodpecker		18	11	20	2	5	2
Eastern Kingbird	15	2	21	9		7	1
Arkansas Kingbird				1			
Crested Flycatcher	3	25	13	23	1	2	
Phoebe	2	2	8	12	10	6	
Yellow-bellied Flycatcher			1			1	
Acadian Flycatcher		4					
Alder Flycatcher		6		6	1		
Least Flycatcher	2	5	8	19		1	2
Wood Pewee	2	5	7	7	5	4	1
Olive-sided Flycatcher		2	1			1	
Prairie Horned Lark		6	10	3		5	4
Tee Swallow	8		3	1			2
Bank Swallow		10	62	22	10	12	3
Rough-winged Swallow	2	40	69	18	50	24	
Barn Swallow	8	15	19	35	12	7	9
Cliff Swallow		1	1	12		1	
Purple Martin	4	15	38	24	15	20	7
Blue Jay	10	100	61	35	23	15	9
Crow	10	80	24	40	10	25	11
Blk-capped Chickadee	30	30	21	24	1	28	9
Tufted Titmouse	2	3	10	16	2	10	
White-breasted Nuthatch	1	5	4	11	1	3	2
Red-breasted Nuthatch					1		
House Wren	50	30	29	54	14	17	13
Bewick's Wren			2				
Prairie Marsh Wren		7	3	3	1	1	
Catbird	15	15	53	42	47	20	10
Brown Thrasher	10	18	48	45	22	14	9
Robin	30	55	133	81	30	25	27

	1. Atlantic	2. Cedar Falls	3. Cedar Rapids	4. Des Moines	5. Dubuque	6. Ottumwa	7. Tama
Wood Thrush	3	2	.12	.2	.5	.1	
Olive-backed Thrush	2	1	.16	.30	.7	.4	
Gray-cheeked Thrush			2	.5	.1	.2	
Willow Thrush						.1	
Bluebird	6	.20	.19	.35	.10	.18	.8
Blue-gray Gnatcatcher	2						
Ruby-crowned Kinglet			2	.3		.5	
Cedar Waxwing		2					
Migrant Shrike	2	2	.2	.7		.4	.1
Starling	.15	.50	.108	.94	.25	.55	.7
Bell's Vireo	3						
Yellow-throated Vireo	1	.4	.4	.1	.5		
Blue-headed Vireo			.6	.3	.1	.2	
Red-eyed Vireo			.5	.4		.6	.3
Philadelphia Vireo			.1	.2		.1	
Warbling Vireo	1	.2	.13	.12	.8	.8	
Black & White Warbler			.4	.2	.9	.2	
Prothonotary Warbler			.3				
Golden-winged Warbler			.1	.3			
Blue-winged Warbler			.1	.4			
Tennessee Warbler	.3	.10	.143	.15	.60	.40	
Orange-crowned Warbler			.15	.2	.9		.2
Nashville Warbler	1	.10	.4	.10	.1	.4	
Parula Warbler	10	.30	.45	.47	.25	.28	.4
Yellow Warbler			.30	.25	.12	.2	
Magnolia Warbler							.2
Blk-thr. Blue Warbler							
Myrtle Warbler	4	.2	.1	.7		.12	.5
Blk-thr. Green Warbler							
Blackburnian Warbler		.5	.11	.2	.4	.6	
Chestnut-sided Warbler		.7	.46	.3	.6	.2	
Bay-breasted Warbler				.7	.2		.3
Black-poll Warbler		.1	.63	.35			.13
Palm Warbler	1	.1	.1	.2			
Oven-bird			.2	.19	.4		.1
Grinn. Water-thrush				.4		.3	
Louisiana Water-thrush	1	.1	.1	.1	.1	.1	
Mourning Warbler	1	.1	.5	.3			
Northern Yellow-throat	25	.30	.60	.31	.20	.16	.1
Yellow-breasted Chat							
Wilson's Warbler	1	.2	.8	.11		.3	
Canada Warbler				.1	.4	.9	.2
American Redstart			.30	.67	.25	.11	.17
English Sparrow	75	.80	.250	.95	.160	.125	.19
Bobolink			.16	.22	.3		
E. Meadowlark	2	.30	.54	.18	.8	.12	.7
W. Meadowlark	3	.50	.3	.22			
Yellow-headed Blackbird	10	.1					
Giant Redwing			.150	.110	.200	.120	.45
Orchard Oriole	15	.12	.26	.26	.21	.2	.10
Baltimore Oriole	45	.300	.156	.127	.25	.125	.35
Bronzed Grackle	10	.80	.69	.46	.65	.25	.3
Cowbird				.1	.1		
Scarlet Tanager							
Cardinal	12	.12	.33	.28	.27	.18	.10
Rose-breasted Grosbeak	1	.10	.34	.22	.16	.16	.6
Blue Grosbeak							
Indigo Bunting	1	.1	.15	.11	.3	.10	.2
Dickeissel	25	.20	.79	.33		.20	.8
Purple Finch				.3			
Goldfinch	45	.500	.243	.68	.68	.45	.13
Red-eyed Towhee				.1	.9	.6	.8
Savannah Sparrow			.6	.1			
Grasshopper Sparrow			6	.2		.2	
Vesper Sparrow			1	.4			
Lark Sparrow			1	.2	.4		
Chipping Sparrow			1	.7	.29	.35	.16
Field Sparrow	22	.12	.15	.24	.17	.10	.4
Harris's Sparrow			2				
White-crnd. Sparrow			2	.7	.8	.4	.10
White-throated Sparrow			1				
Lincoln's Sparrow			1	.1			
Swamp Sparrow			1				
Song Sparrow			6	.10	.9	.12	.11
TOTAL SPECIES			78	.113	.124	.106	.66
TOTAL INDIVIDUALS			727	[2361]	[3025]	[2180]	[1138]
GRAND TOTAL:						1252	402
SPECIES	154						
INDIVIDUALS	11085						

[Page 1]

5. DUBUQUE. Dubuque Co. Territory 50% marshland, 40% wooded hills, 10% open fields. May 18; 7 hours. Clear; temp. 55° to 70°; 1 mile by car, 8 on foot. Henry Herrmann, Myrtle and James Dockal, Ival Schuster.

6. OTTUMWA. Wapello Co. Hamilton Park, Community Gardens, Rock Bluff Road, Ormanville Road, Lake Wapello, Old Agency Road. May 18; 5 to 9. 9:45 a.m. to 12:30 p.m., 2 to 6 p.m.; total, 10½ hours, 25½ observer hours. Clear, little wind; temp. 50° at start, 70° at return; 70 miles by car, 4 on foot. Charles C. Ayres, Jr., Pearle C. Walker, Marietta Eighme, Geraldine Stewart.

7. TAMA. Tama Co. Vicinity of golf course, county gravel road NW of Tama to Toledo Ridge Road; on Sac and Fox Indian Reservation road through oak, hickory and pine timber to highway 30; slough and Iowa River bottom-land; along banks of Lake Cherry, wooded area NE of Tama. May 18; 6 hours. Clear; light SW wind; temp. 72°; 30 miles by car, 4 on foot. Thelma Carmichael, Mrs. Gertrude Zimmer, Dick and Dave Zimmer.

LOCAL BIRD CLUBS IN IOWA

ATLANTIC.—The Atlantic Bird Club concluded a successful year in May with a picnic dinner and a report and discussion of the Spring Census.

One of our most interesting programs was given by one of our members who had had a two-weeks trip around the Gaspe Peninsula and a boat trip around Bonaventure Island with its famous bird sanctuary. The annual Christmas Count was followed by a pot luck supper and a compilation of the count. Our local Conservation officer gave us a splendid program on waterfowl migration with fine pictures taken along the Missouri River during spring migration. Our club planted and is maintaining a planting of native, berried shrubs in a wayside park east of town. Two of our high school members built a large feeding station which they gave to the school. It is placed among berried shrubs near the building and creates much interest among the students. Another of our members who is a grade school teacher has organized a Bird Club among her pupils. The club meets once a week after school and the interest has been so great that pupils from other grades have asked to become members.

We participated in the Iowa Centennial celebration last year by preparing an educational exhibit in a store window. The exhibit stressed the value of the hawk to the farmer. By means of mounted hawks and lettered placards we put across our message. A large crowd around the window convinced us of its value. We also put up a bird refuge exhibit at the annual Flower Show in which we displayed proper feeding methods as well as shelter devices.

Several members attended the national meeting of the Wilson Ornithological Club at Omaha last November, as well as the Audubon Screen Tour lectures held in Joselyn Memorial building in Omaha. Two of our members, both of whom served overseas, are studying wildlife management at Iowa State College. We are very fortunate to have among our members Frank C. Pellett, nationally known naturalist and authority on bee culture. He travels widely during the winter and always has fascinating things to tell us when he returns to Atlantic in the spring.

Our present officers are: Mrs. Catharine Farquhar, president; Miss Bertha Kjar, vice-president; Miss Gertrude Ellick, secy.-treasurer.

CEDAR FALLS.—The Cedar Falls Audubon Club, with 46 active members, has had a very interesting and profitable season. We have had meetings every month with a variety of instructive programs always followed by

an exchange of personal experiences and observations. We have a very active and efficient hike committee and, as you know, an excellent birding area, providing something of especial interest on every trip into God's great out-of-doors.

The highlight of our year's activities was the annual meeting of the Iowa Ornithologist's Union in our city in May. Ideal weather, an interesting program, well-planned entertainment and field trips, combined to make it a week-end long to be treasured in our memories.

In conjunction with our neighboring Waterloo Audubon Club, we are sponsoring for a second season a series of Audubon Screen Tours. The five programs of pictures and lectures furnished us last year were outstanding, and if we may judge by the first showing this season, the programs this year will provide the same fine quality of entertainment.

The Cedar Falls Audubon Club maintains a Bird Sanctuary in a wooded area on the banks of the Cedar River. Seed and suet feeders have been erected in this locality and are kept filled during the winter season. In the spring bird houses of various types were placed in the sanctuary and were immediately tenanted by our feathered friends. The bird houses were presented to the Audubon Club by one of the local Boy Scout troops and were constructed by them in a contest conducted by their troop. Members of the Audubon Club, with the assistance of some volunteers, erected the houses on one of the first balmy days of spring, concluding the activities with a wiener roast and picnic supper. It has been very gratifying to those working on this committee to see the number and variety of birds coming regularly to these feeders. Planting of berry-bearing shrubs and vines has also been made on the land and paths made through the sanctuary.

Our members are all of the opinion that there is no hobby like "birding" for providing every-day pleasure, and a keen appreciation of the beauty of this wonderful world we live in.—VERNA M. DAVIS, Secretary.

CEDAR RAPIDS.—The Cedar Rapids Bird Club opened its 18th year with a dinner meeting at Biderman's Hotel, Upper Palisades, September 19. Members reported on "Summer Bird Experiences and Observations." At this meeting arrangements were completed for the Audubon Screen Tours, which are being presented for the first time in Cedar Rapids. This series of illustrated lectures is being sponsored jointly by the Cedar Rapids Bird Club and the Natural Science Club. Allan Cruickshank showed his "South Along the Suwanee" to a capacity audience as the first number in the series on October 6. Those to be presented on later dates include "Athabasca Sojourn", by Dr. Olin S. Pettingill; "Our Heritage in the Rockies," by Karl H. Maslowski; "This Curious World in Nature," by Wm. Ferguson; "Canada West," by Bert Harwell.

On November 3, Miss Dorothy Jensen of Iowa City reviewed a paper, "Life History Study of the Red-eyed Vireo," by Mrs. Helen Webb of New York. Mr. Steffen exhibited his paintings of vireos and skins of these species were displayed. At a joint meeting of the two clubs, December 11, Dr. and Mrs. Robert Vane will show colored moving pictures and slides taken on a trip to Yellowstone National Park during the past summer. Dr. Vane was successful in photographing the Trumpeter Swans. A review of the book, "Audubon's America," by Donald C. Peattie, is to be given by Miss Evelyn Chadbourne on January 5. At this January meeting the Field Trip Committee will report on the Christmas bird census, and skins of some of the birds listed on the census will be shown. The annual dinner meeting, in charge

of the Social Committee, will be held on February 2, with a guest speaker yet to be chosen. "Musical Shorthand for Bird Songs" will be discussed by Miss Esther Copp at the March 1 meeting, with phonograph recording of birds' songs as an added feature. Mrs. Marguerite Laude of Iowa City will discuss "The Status of Some Rare Birds in the United States" at the May 3 meeting, and Miss Lillian Serbousek expects to conclude the program with a review of "Records of Rare Birds in the Cedar Rapids Locality." The final meeting of the year is the annual picnic next June 7, as planned by the Social Committee. In addition to the indoor meetings, the Field Trip Committee has scheduled one field trip each month.

Current officers of the Club are: Dr. Robert Vane, president; Miss Virginia Slauzon, vice-president; Miss Margaret Dickey, secy.-treasurer.—LILLIAN SERBOUSEK.

DES MOINES.—The Des Moines Audubon Society was formed in 1923 and has been active as a group since that time. The organization has grown from a few persons to a paid membership of 170. A two-acre bird sanctuary is maintained in a Des Moines residential district and is open to any interested group. Here feeding stations are kept filled during the winter months and shelters are built for winter protection. The Society has sponsored the National Audubon Wildlife Screen Tour series for the past four years and is sponsoring it again this year, the fifth time. A six-page newspaper is published bi-monthly; in it accounts of local activities, and state and national conservation legislation are printed to keep members informed. Within the Society, several study groups have been formed to further knowledge of plants, birds and insects. A new study group has been formed this year to study the constellations.

Several field trips are made each year; one in March to list early arrivals, a spring migratory census, a trip in April to the Ledges State Park, a breakfast and field trip in May to the Des Moines Waterworks park area, a fall migratory bird count, two trips in the fall (one to Brenton's slough, the other to the new Waterworks impounding reservoir to study waterfowl), and the Christmas bird census. There is usually a trip, spring and fall, to the Camp Dodge military reservation, known locally as "Dove Woods," to study sparrows and warblers. In addition to the Screen Tour Series there are four or five business meetings each year; speakers talk to the Society of the general conservation picture. A conservation committee is a part of the society and it functions very actively during legislative years. The Des Moines Audubon Society is very proud to have as its members a number of persons who are rather well known in the field of ornithology and conservation.—MRS. LESTER W. HASKELL, Secretary.

DUBUQUE.—The Dubuque Audubon Club regularly starts the year's activities with a pot-luck dinner at Eagle Point Park, when summer experiences are recalled, committees named and the year's work discussed. At the Christmas meeting we again have a pot-luck dinner and a party.

Programs during 1947 were given by local members—two by ex GI's, Lyle Bradley showed pictures and F. L. Hoffman discussed bird observations in England and Europe. Several colored movies were shown at the meetings. A hike is scheduled at least once a month through the year, and during the height of spring migration, there is one practically every week. The Club takes part in the Christmas count and the spring census in May, when

there is an all-day trip with picnic lunch at noon. This is planned to take in the marshes, woods around Durango and the river section.

This year the Club is sponsoring the Audubon Screen Tours. Programs are given at Washington Junior High School. The first lecturer, William Ferguson, was enthusiastically received and the Club feels hopeful not only of paying out on the project but also of interesting others in bird observations.

Officers for the year are: J. A. Dockal, president; Henry Herrmann, vice-president; Mary Young, secretary; Ival Schuster, treasurer.—MARY YOUNG.

RECENT BIRD BOOKS

WINGS IN THE WILDERNESS. by Allan D. Cruickshank (Oxford University Press, New York, 1947; cloth, square 8vo, about 265 pages with 125 photographs; price, \$6).

Bird photography has progressed by leaps and bounds in our generation. The high-speed camera, telescopic lens and other developments have contributed greatly to the success of modern photographic efforts. One has only to go back to the photographs in bird books published during the first part of this century to realize how much photography has improved. We older bird students many years ago admired the beauty of a series of commercial bird pictures, which were produced by photographing mounted birds in supposedly natural positions and habitat, then applying color when they were printed. In those days cameras were too slow to catch the moving bird and photographers couldn't get near enough to the live bird to obtain a large, clear picture. These colored pictures were printed to the amount of several million and graced the walls of nearly every school room in the country. Considered the finest thing available at the time, they found their way into many reputable bird books. What sorry caricatures of bird life these pictures are today, and what a contrast to the work of Allan Cruickshank and other modern bird photographers!

"Wings in the Wilderness" is a picture book. It contains 125 outstanding photographs which Mr. Cruickshank selected from his vast collection of 30,000 negatives. Every picture is a masterpiece of the bird photographer's art and shows the great skill of Mr. Cruickshank, whose reputation as a photographer is nation-wide. The book will be especially interesting to Iowans, for Mr. Cruickshank has visited and is visiting many Iowa cities as a lecturer on the Audubon Screen Tours. Many of the photographs in his book will be familiar to those who have seen his moving pictures. All the photographs in the book have a facing page with a rather brief descriptive caption, though the pictures speak for themselves. Each photograph is clear and sharp, and there is no evidence of enlargement which is seen in some books when a full-page picture is made from a small negative. At the end of the book there is a table of photographic data giving lens size and shutter speed for every picture.

To bird photographers the book will be a lasting delight. To those who want a written text to hold the book together it will be a disappointment. We have quite a number of modern bird books made up wholly or largely of photographs—Aymar's "Bird Flight," Squire's "Wildfowling With a Camera," Schwartz's "Prairie Chicken in Missouri," Queeny's "Prairie Wings," and others. Cruickshank's new production is a notable addition to this class of books.—F.J.P.

WATERFOWL IN IOWA, by Jack W. and Mary R. Musgrove. Second Edition. (State Conservation Commission, Des Moines, Iowa, 1947; cloth, 8vo, pp. i-ix & 1-132, with 8 colored pls., 9 full-page drawings, and chapter head decorations by Maynard F. Reece; price, \$1.)

Four years ago the Iowa Conservation Commission published the first edition of "Waterfowl in Iowa." Books on the waterfowl are common enough, but this was a pioneer effort because the book was intended for the use of sportsmen. It was an educational project, and our Conservation Commission showed good judgment and foresight in publishing the book. With strict federal regulations in force, the sportsman needed just such a book to help him to know the ducks and to identify them in the field. The very low price assured its sale to the hunting fraternity. The book was well advertised and in a short time the entire edition of 5,000 copies was sold. It is safe to say that a large percentage of the books went to hunters and were carried on numerous hunting trips and thoroughly studied. The colored plates were very helpful in identification and the well arranged, boiled-down descriptions of the various species supplied a great deal of information needed by every hunter.

The Commission has had a second edition of "Waterfowl in Iowa" prepared and printed—4,250 copies, which at the very low price of one dollar each will be quickly sold. Considering the inflated prices of other books, "Waterfowl in Iowa," certainly offers a great deal of value at a minimum price. As an educational publication it will continue to hold an important place.

The written text is essentially the same as the first edition, but Mr. and Mrs. Musgrove have given it some revision. There are a number of additions and corrections, some of which were suggested by Philip A. DuMont after the first edition was published. Thirty-six species of ducks and geese are described, each given a fairly uniform treatment. The plumages of male, female and juveniles are thoroughly covered, with special field marks pointed out. Breeding and winter ranges are mentioned briefly, and there are paragraphs on migration, nesting and food, with a concluding summary of each bird's status in Iowa. The fine colored plates by Maynard Reece add a great deal to the attractiveness and general utility of the book. As in the first edition, there are chapters on "Seasonal and Individual Variation in Plumage of Waterfowl," "Migrations and Flyways," "Enemies of Waterfowl" and "Lead Poisoning." A new chapter on the banding of waterfowl has been added, and there is a lengthy and very fine description of "The Goose Flight of Western Iowa," with maps showing where the largest concentrations of geese may be found and the highways leading to these areas. The spring goose migration in western Iowa is a thrilling spectacle which is attracting more observers each year. This chapter is so interesting and contains so much information for us Iowa bird students, we have asked for and have been granted permission to reprint it in its entirety in the present issue of "Iowa Bird Life."

The book closes with an "Accidental and Hypothetical List," a list of the waterfowl classified by scientific names, a key to plumage identification, a glossary and an index. Black and white drawings by Mr. Reece are scattered through the book at appropriate places. The book is printed on good paper, with attractive format and substantial cloth binding. It is a distinct credit to the authors, the illustrator and the State Conservation Commission who sponsored it.—F.J.P.

BLACK WINGS, THE UNBEATABLE CROW, by Joseph Wharton Lippincott (J. B. Lippincott Co., Philadelphia, 1947; cloth, 12mo, pp. 1-144, with a colored plate & 21 drawings by Lynn Bogue Hunt; price, \$2.50).

Probably known to more people than any other bird, the Crow is a familiar part of the landscape over much of the United States. But it is the subject of much prejudiced thought and its economic value is usually misunderstood. Much has been written about the bird, with many writers quite vehement in condemnation and not finding a single redeeming quality in the Crow's nature. Therefore it is a pleasure to pick up a book like "Black Wings," for the author presents the other side of the picture and endeavors to show the Crow in a favorable light.

The author of this book is president of the large publishing house which bears his name, but nature study and nature writing have been his hobbies for many years—the outgrowth of a love of nature that began in early boyhood. He writes about the outdoors in an entertaining and thoroughly sympathetic way that indicates he has lived all the experiences he relates. His descriptions of farm life will bring nostalgic memories to many a city dweller raised on the farm.

Using 50 years of experience with Crows, during which time many young birds were raised as pets, Mr. Lippincott puts together a full life story of the Crow. The account begins when a storm blows down a Crow nest and a nestling Crow is taken home by a farmer. The young Crow grows up in the semi-domestic circle of the farm yard. Adventures of various kinds, usually showing the good side of the Crow's behavior, are woven into a dramatic, often exciting narrative with several human characters playing a part. The young Crow escapes an early death and learns to be clever, belligerent and successful when he returns to the wild. With a mate he raises a family and lives by his own resources. The reader will follow his forays, troubles and victories with an eager interest, for here is good ornithology, coupled with true experience and a story well told. A book to sit down with on a winter evening, it will be found a thoroughly enjoyable trip into the outdoors, leaving one with more knowledge of the Crow's life history and a little more admiration for this ever-present neighbor.—F. J. P.

COMPARATIVE ANALYSIS OF RED FOX FEEDING TRENDS ON TWO CENTRAL IOWA AREAS, by Thos. G. Scott (Iowa State College, Ames, Iowa, 1947; Research Bull. 353; wrappers, pp. 425-487, with photographs, figs. & tables).

Although not a bird bulletin, this publication contains many valuable data on the food of foxes in relation to poultry and native bird life, and should be of great interest to our Iowa members, who are accustomed to hear the prejudiced reports of red fox depredations from time to time. Dr. Scott's bulletin is a very full study of the feeding trends of the northern plains red fox in two different habitats (Wall Lake Area, Wright County, and Mingoona Area, Boone County), as determined by field and laboratory methods involving the analysis of nearly 1,500 fecal samples. The feeding of red foxes was found to adjust itself to the availability of food, and it was learned that they frequently used foods they did not kill and often killed prey that they did not eat, with feeding habits changed when necessary to meet emergencies. Cottontail rabbit populations seemed to withstand the predation by foxes, and it is stated that intelligent poultry-raising practices will cut down losses from that source. Ring-necked Pheasants suffered considerably from foxes and the male birds seemed more vulnerable than females during the courtship

period; destruction of eggs did not appear to be a serious factor and little evidence was obtained to show that foxes were destructive to young pheasants. Quite a number of species of small birds fall victim to the red fox or are picked up dead and eaten; a number of such occurrences are mentioned. The results of the study make a valuable contribution to the life history of the red fox.

Dr. Scott would like to place this bulletin in the hands of as many of our members as may be interested. He will send it free to those who request it, and he should be addressed in care of the Iowa Cooperative Wildlife Research Unit, Iowa State College, Ames.—F. J. P.

MEMBERSHIP NEWS

President Ayres attended the annual meeting of the National Audubon Society, held at New York City during the fourth week of October. On Saturday, October 18, a trip was made to the Audubon Nature Center at Greenwich, Connecticut, where some short field trips were taken and moving pictures were shown. In the evening, a few people were invited to remain for a little social gathering of the Audubon staff and their wives, and Mr. Ayres was included in the group. On Sunday, October 19, a field trip was taken to the easternmost tip of Long Island, Montauk Point, by bus leaving New York City at 6 a.m. Though it was cloudy and misty, many birds were seen—among them a great many Mute Swans, Black Ducks, American Scoters and Great Black-backed Gulls. Several Osprey nests built on the top of telephone poles were observed. The return was made about 9 p.m., after having covered about 300 miles. About 150 to 180 people, in five buses, made this interesting trip. The leaders were Allan Cruickshank, Robert Allen, Richard Pough, Joseph Hickey and Carl Buchheister. Monday was devoted mostly to reports of the Audubon staff, and representatives and delegates from affiliated societies, who told of the work of their organizations. Mr. Ayres said he was very pleasantly surprised to find Miss Zell C. Lee of Sioux City in attendance. Miss Lee was called upon to speak and made a very good report on the activities of the Sioux City Bird Club. On Monday night there was a forum at the American Museum of Natural History, after which a fine film by Howard Orians was shown.

Tuesday, October 21, resumed the Audubon proceedings of Monday, with an official business meeting in the afternoon. Mr. Ayres was called upon for a report from Iowa during the course of the meeting. That evening he attended a small social gathering at the home of Mr. Buchheister, vice-president of the National Audubon Society, and from there he went to a dinner at the Roosevelt Hotel; at this dinner a medal was presented to Mr. Bennett, head of the Soils Conservation Service, for noteworthy achievements. Afterward a film entitled "Saguaro Land" was shown by Carl Maslowski. This concluded the Audubon Society's annual meeting.

President Ayres had the opportunity for visits with Dr. Ira N. Gabrielson, Dr. Ludlow Griscom, Roger Tory Peterson, and others. Mr. Peterson gave him an autographed copy of his new Field Guide. Mr. Ayres remained in New York until that Thursday, then went to Chicago on Friday. From Chicago he was flown to Ottumwa by a friend who has an airplane. We are very glad that our President could attend this important Audubon meeting and that he and Miss Lee represented our state there. In referring to the meeting, Mr. Ayres says: "It was a most enjoyable experience, and I wished that all the members of the Iowa Ornithologists' Union could have been present."

MEMBERSHIP ROLL OF THE IOWA ORNITHOLOGISTS' UNION*

CHARTER MEMBERS (1923)

(H) Bailey, Mrs. Mary L., Sioux City	Palas, Arthur J., Postville
Battell, Mrs. F. L., Ames	Pierce, Fred J., Winthrop
Bennett, Walter W., Los Angeles, Calif.	Spiker, Chas. J., Branchport, N.Y.
Kinnaird, Mrs. W. A., West Des Moines	(H) Stephens, Dr. T. C., Sioux City
Mills, Wier R., Pierson	Wendelburg, Mrs. Toni R., Des Moines
	Wolden, B. O., Estherville

MEMBERS

Adams, Miss Edric, Waterloo, '47	Blythe, Miss Emma, Williamsburg, '46
Adams, I. C. Jr., Columbia, Mo., '41	Bordner, Mrs. Frances, Iowa City, '29
Allen, Theodore, Muscatine, '47	Boyd, Dr. and Mrs. Ivan L., Baldwin Kans., '37
Allert, Oscar P., McGregor, '29	Brazonier, Wendell, Des Moines, '47
Anderson, Dr. Rudolph M., Ottawa Canada, '42	Brooks, Dr. Frank G., Mt. Vernon, '45
(S) Atlantic Bird Club, Atlantic, '47	Brown, Mrs. Helen M., New York, N.Y., '46
Austin, Carl E., Winnipeg, Canada. '45	Brown, Mr. and Mrs. Woodward H., Des Moines, '47
Austin, Mrs. E. J., Charles City, '42	Brunner, Miss Dorothy, Cedar Rapids, '46
Austin, Dr. O. L., Tuckahoe, N.Y., '31	Brunner, Miss Marjorie, Cedar Rapids, '46
(S) Ayres, Charles C. Jr., Ottumwa, '41	Buffum, Hugh S., Cedar Falls, '47
Bailey, John H., Davenport, '45	Burns, Mrs. C. E., Ottumwa, '46
Barlow, Mrs. John, Waterloo, '42	Carlson, Mrs. Joel E., Boone, '47
Barnhart, Miss Lola, McAllen, Tex., '47	Carmichael, Miss Thelma, Tama, '46
(S) Bartlett, Wesley H., Algona, '35	(J) Carter, Dennis, Thor, '47
Bates, Curtis E., Rome, N.Y., '46	(S) Cedar Falls Audubon Club, Cedar Falls, '47
Baumgartner, Miss Josephine, Des Moines, '42	(C) Cedar Rapids Bird Club, Cedar Rapids, '47
Becker, Miss Hilda, Davenport, '26	Chadbourne, Miss Evelyn, Cedar Rapids, '47
Beckwith, Miss Alma, Atlantic, '39	Chadbourne, Dr. T. L., Vinton, '38
Berkowitz, Mr. and Mrs. Albert C., Des Moines, '43 and '47	Chamberlain, Mrs. Florence C., Des Moines, '47
Bibbee, Prof. P. C., Athens, W. Va., '45	Clark, Mrs. Ella L., Burlington, '25
(S) Bice, Mrs. Don C., Atlantic, '42	Coe, Rev. Albert E., Dysart, '47
Binsfeld, Mrs. A. J., Des Moines, '47	Confare, Miss Miriam, Cedar Rapids, '42
Birdsall, E. R., Keosauqua, '47	Connor, Mrs. Stephen, Sigourney, '46
(S) Birkeland, Henry, Roland, '33	Copp, Miss C. Esther, Wheatland, '33
Bishop, Dr. Louis B., Pasadena, Calif., '34	Crouter, Miss Frances, Cedar Falls, '44
Bixler, Mrs. Ingram, Cedar Rapids, '44	Currier, Ed S., Portland, Ore., '34
Bliese, John C. W., Mt. Vernon, '35	
Blomstrand, Harry K., Fonda, '46	
Bly, Mrs. Gordon, Independence, '47	

* Complete to November 1, 1947. Year of joining the Union follows the name of each member. All cities are within Iowa unless otherwise noted. The following key letters are used in the list:

- (C)—Contributing Member.
- (H)—Honorary Member.
- (J)—Junior Member.
- (S)—Supporting Member.

- Daft, Miss Ruth E., Griswold, '46
 Dales, Mrs. Marie, Sioux City, '29
 Daum, Miss Wanda, Waterloo, '47
 DeLong, Mrs. W. C., Lamoni, '39
 (S) Des Moines Audubon Society, Des Moines, '47
 Devereaux, Eugene, Mt. Vernon, '45
 Dickey, Miss Margaret, Cedar Rapids, '46
 Dix, Mrs. Ray S., Cedar Falls, '35
 Dole, J. Wilbur, Fairfield, '29
 Dorweiler, Miss Margaret, Cedar Falls, '45
 Downing, Glenn R., Iowa City, '38
 Dragoo, Lavina, Cedar Rapids, '29
 Drury, Miss Eleanor, Davenport, '47
 Dubuque Audubon Club, Dubuque, '33
 Dulany, Geo. W. Jr., La Jolla, Calif., '43
 DuMont, Mrs. Janet, Des Moines, '27
 DuMont, Philip A., Chicago, Ill., '24
 Dvorak, Joseph L., Chicago, Ill., '47
 Eastman, Mrs. E. P., Burlington, '29
 Edgar, Mrs. G. P., Burlington, '39
 Edge, Mrs. C. N., New York, N.Y., '31
 (S) Eighme, Miss Marietta, Ottumwa, '43
 Eighme, Mrs. Rufus N., Tingley, '46
 Ennis, Mrs. Edna M., Tama, '44
 (S) Ennis, Dr. J. H., Mt. Vernon, '41
 Errington, Dr. Paul L., Ames, '32
 Ewing, H. E., Washington, D.C., '43
 Farquhar, Catharine, Atlantic, '46
 Faulkner, Geo. O., Waterloo, '31
 (S) Fitzsimmons, C. S., Sibley, '45
 Feeney, Rev. Thos. J., Davenport, '47
 Flodin, Mrs. C. C., Cedar Rapids, '31
 (S) Frankel, Mrs. Henry, Des Moines, '25
 Fritzsche, Carl R., Sioux City, '46
 Funk, Miss Ruth F., Independence, '40
 Garberson, Miss Marguerite, Sibley, '46
 Gessell, Mrs. E. C., Des Moines, '43
 Giernot, Bruno B., Iowa City, '46
 Gingerich, Mrs. A. C., Wellman, '46
 Glotfelty, Miss Ila, Fairfield, '45
 Goodman, John D., Ann Arbor, Mich., '41
 Grant, Dr. Martin L., Cedar Falls, '37
 Gross, Dr. Alfred O., Brunswick, Maine, '42
 Grummann, Mrs. Herbert R., St. Louis, Mo., '43
 Guthrie, Richard A., Woodward, '39
 Hallowell, Miss Loraine, Waterloo, '32
 Hantelmann, Miss Salina, Waterloo, '47
 Harford, Dr. Henry M., Kansas City, Mo., '45
 (J) Hart, Rodney, Davenport, '47
 Hathorn, Glen M., Cedar Rapids, '34
 Hawk, Grover C., Hedrick, '44
 Hays, Russell M., Waterloo, '47
 Hayette, Miss Verona, Cedar Rapids, '43
 (J) Hazard, Norwood, Davenport, '47
 Hedges, Harold C., Kansas City, Kans., '46
 Hendrickson, Dr. and Mrs. Geo. O., Ames, '31 and '44
 Henning, Miss Kay, Decorah, '47
 (S) Henning, Mrs. Tom, Decorah, '47
 Herrmann, Henry, Dubuque, '45
 Heuer, Ralph, Davenport, '40
 Heuser, E. P., Dubuque, '40
 Hicks, Dr. Lawrence E., Columbus, Ohio, '38
 Hillman, Mrs. Jay, Rockford, '44
 Hodges, James, Davenport, '44
 (J) Holst, Emmett, DeWitt, '46
 Hopkins, Joseph W., Colo., '47
 Horvei, Miss Amanda, Lake Mills, '47
 Hoskinson, Mrs. Helen H., Clarinda, '40
 Howard, Miss Alta, Des Moines, '46
 Hoyman, Miss Isabelle, Cedar Rapids, '42
 Huff, Mrs. Lloyd, Des Moines, '46
 Jacobsen, Mrs. John, Lake View, '46
 Jahn, Mrs. Theodore L., Iowa City, '43
 Janssen, Rev. James, Davenport, '47
 (S) Jaques, H. E., Mt. Pleasant, '47
 Johnson, Mr. and Mrs. Ralph W., Ames, '39 and '27
 Jones, Mr. and Mrs. Myrle L., Boone, '31 and '41
 Kath, Dave L., Davenport, '47
 (S) Keck, Dr. Warren N., Naper-ville, Ill., '36
 Kent, Mrs. Wm., Cedar Rapids, '32
 (H) Keyes, Dr. Charles R., Mt. Vernon, '44
 King, Mrs. Helen G., Grundy Center, '33
 Knoop, Miss Pearl, Marble Rock, '37
 Kubichek, Wesley F., Evanston, Ill., '41
 Kurth, E. A., Grinnell, '46
 Laffoon, Jean L., Ames, '40
 Lahr, Mrs. H. W., Storm Lake, '43

- Lambert, Mrs. Adaline T., Sioux City, '40
 Laros, Jerry, Grinnell, '47
 Laude, Dr. and Mrs. Peter P., Iowa City, '42 and '47
 Lauritzen, A. E., Algona, '47
 Lawson, Miss Faye, Fairfield, '45
 Lawton, Mrs. Addison C., Des Moines, '46
 (S) Lee, Miss Zell C., Sioux City, '43
 Leigh, Miss Grace D., Independence, '45
 Loban, Miss Myra E., Waterloo, '38
 Loban, Miss R. Lucile, Waterloo, '38
 Lotz, E. P., Burlington, '46
 (J) Luckstead, David DeWitt, '46
 Luther, Mrs. J. S., Winthrop, '46
 Lynch, Mrs. C. J., Cedar Rapids, '46
 MacMartin, Mrs. W. G., Tama, '32
 Maier, Miss Grace, Elkport, '46
 Mayberry, Mrs. E. L., Monmouth, '46
 McCabe, Miss Olivia, Des Moines, '32
 McCartney, Mrs. R. C., Charles City, '42
 (S) McCutcheon, Jas. W., Mt. Vernon, '46
 McDonald, Malcolm, Ann Arbor, Mich., '35
 McGuire, Uncas M., Creston, '46
 Melcher, Rev. M. C., Epworth, '39
 Melvold, Burton W., Paullina, '31
 Meyer, Dr. Alfred W., Cedar Rapids, '42
 Michael, Maude, Waterloo, '47
 Millikin, Mrs. Forrest G., Creston, '44
 Moore, John Paul, Newton, '47
 Morrissey, Thos. J., Davenport, '40
 Morton, Miss Thelma, Cedar Rapids, '43
 Moser, Dr. R. Allyn, Omaha, Nebr., '41
 Mote, Mr. and Mrs. G. A., Marshalltown, '29
 Musgrove, Mr. and Mrs. Jack W., Des Moines, '38 and '43
 (J) Musgrove, Miss Jean, Des Moines, '44
 Musselman, Dr. T. E., Quincy, Ill., '44
 Myers, Mrs. Len, Waterloo, '39
 Neidy, Miss Carrie, Waterloo, '47
 Nichols, Harvey L., Waterloo, '29
 (J) Nomland, Knute, Iowa City, '47
 Oberholser, Dr. Harry C., Cleveland, Ohio, '32
 Olinger, Miss Lucile, Toddville, '47
 Ollivier, Roy, Mt. Pleasant, '43
 Olmsted, Miss Carrie, Humboldt, '46
 (J) Olson, Richard, Eldridge, '47
 Only, Frank, Los Gatos, Calif., '44
 Orr, Ellison, Waukon, '35
 Osia, Miss Catherine, Humboldt, '46
 (S) Ottumwa Bird Club, Ottumwa, '47
 Padgham, John B., Grinnell, '47
 Parsons, Mrs. Robt. O., Dickens, '42
 (J) Peahl, Arlen, DeWitt, '46
 Peasley, Dr. and Mrs. Harold R., Des Moines, '43 and '44
 (S) Peel, Clarence O., Boone, '41
 Petranek, Mr. and Mrs. E. J., Cedar Rapids, '31
 Pettingill, Dr. O. S., Northfield, Minn., '37
 Pickering, Mrs. Lawrence J., Red Oak, '46
 Pierce, Robert A., Elizabethtown, Ky., '41
 (J) Pike, Robert G., Coggon, '47
 Pike, Walter E., Coggon, '46
 Prestegard, Miss Tillie, Cedar Rapids, '45
 Purdy, Miss Ruth, Cedar Rapids, '43
 Rector, Harry E., Vinton, '42
 Reynolds, Miss E. Estella, Des Moines, '43
 Roberts, Dr. F. L. R., Spirit Lake, '24
 Roberts, Dr. Mary P. Spirit Lake, '26
 Robertson, Dr. C. W., Waterloo, '47
 Rosene, Walter, Jr., Gadsden, Ala., '42
 Ross, Hollis T., Lewisburg, Pa., '40
 Ruegnitz, Mr. and Mrs. R. S., Dubuque, '43 and '42
 Rugg, Mrs. Russell, Cedar Falls, '46
 (S) Ruhr, Eugene, Atlantic, '41
 Sage, Evan, Waterloo, '42
 Sage, J. R., Ames, '47
 (H) Savage, David L., Mt. Pleasant, '44
 Schramm, Frank H., Burlington, '34
 Schuster, Miss Ival M., Dubuque, '41
 Scott, Dr. Thos. G., Ames, '37
 (S) Serbousek, Miss Lillian E., Cedar Rapids, '31
 Shay, Miss Gladys, Independence, '47
 Shields, Mrs. David H., Mitchellville, '46
 Shuttleworth, Miss Ann F., Cedar Rapids, '47
 (S) Shuttleworth, Mrs. W. D. Sibley, '45
 Smith, Mr. and Mrs. Dwight T., Des Moines, '43 and '44
 Smith, Miss Irene M. Des Moines, '43

- Smith, Mrs. Wm. Merwin, Milford, '45
 Spohnheimer, Victor, Keokuk, '47
 Steffen, Miss Emily, Cedar Rapids, '42
 Steffen, E. W., Cedar Rapids, '42
 Stewart, Dr. Chas. A. New Albin, '44
 Stewart, Paul A., Leetonia, Ohio, '43
 (S) Stiles, Bruce F., Des Moines, '37
 Stoner, Emerson A., Benicia, Calif., '46
 (S) Stoner, Mrs. Lillian C., Albany, N.Y., '45
 Strickland, J. W. Jr., Mt. Vernon, '45
 Sutton, Dr. Geo. M., Ann Arbor, Mich., '41
 Tarr, Miss Margherita, Duluth, Minn., '46
 (S) Taylor, Mrs. H. J., Berkeley, Calif., '39
 Thomas, Mr. and Mrs. O. S., Rock Rapids, '29
 Thornburg, Mrs. Ross J., Tucson, Ariz., '37
 Tillapaugh, Miss Iola, Cedar Rapids, '42
 Tobin, John, Vinton, '38
 Tonkin, George, Newberg, Ore., '38
 Turnbull, Mrs. H. W., Diagonal, '44
- Turner, Richard, Iowa City, '47
 Turner, Mrs. Stella, Clarinda, '42
 Uban, Mrs. J. L., Waterloo, '47
 (S) Vane, Dr. and Mrs. Robt. F., Cedar Rapids, '40 and '46
 (S) Walker, Pearle C., Ottumwa, '43
 Ward, Mrs. J. J., Wellman, '46
 Warters, Miss Mary Ellen, Des Moines, '46
 (S) Waterloo Audubon Society, Waterloo, '47
 Weaver, Miss Gertrude S., Sioux City, '46
 Weber, Alois John, Keokuk, '29
 Whitlock, Ralph, Witts, England, '46
 Williams, Chester W., Dedham, Mass., '46
 Willis, Miss Myra G., Cedar Rapids, '40
 (J) Wilson, David, Mt. Vernon, '45
 Wilson, Ernest, Ottumwa, '46
 Wistey, Mrs. Lloyd, South English, '42
 Witt, Miss Elizabeth, Elkader, '43
 Wolden, Mrs. B. O., Estherville, '39
 Wood, Miss Mary E., Ottumwa, '45
 Young, Miss Katherine, Waterloo, '47
 Young, Miss Mary H., Dubuque, '40
 Youngworth, Wm. G., Sioux City, '26

LIBRARIES*

- Carnegie-Stout Public Library, Dubuque, '31
 Cornell College Library, Mt. Vernon, '45
 Iowa State Traveling Library, Des Moines, '40
 Kendall Young Library, Webster City, '31
 Library, Iowa State Teachers College, Cedar Falls, '39
 Library, U.S. Dept. of Agriculture, Washington, D.C., '31

- McGill University Library, Montreal, Que., '32
 Public Library, Cedar Rapids, '31
 Public Library, Council Bluffs, '31
 Public Library, Davenport, '47
 Public Library, Des Moines, '31
 Public Library, Fort Dodge, '36
 Public Library, Marshalltown, '46
 Public Library, Sioux City, '31
 State College of Washington Library, Pullman, Wash., '45
 University of Illinois Library, Urbana, Ill., '42

* Exchanges are not included in this list.

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